

SOME NOMENCLATRURAL CHANGES IN THE CHALCIDOIDEA (HYMENOPTERA)

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Abstract.—The following new synonymies and nomenclatural changes are proposed for taxa in several families of Chalcidoidea. Eurytomidae: *Eurytoma appendigaster* of American authors (*nec* Swederus, 1795) = *Eurytoma verticillata* (Fabricius, 1789); *Eurytoma gossypii* Bugbee, 1967 = *Eurytoma herrerae* (Ashmead, 1902). Torymidae: *Megastigmus grandiosus* Yoshimoto, 1979 = *Megastigmus albifrons* Walker, 1869; *Torymus bakeri* Cameron, 1904 = *Torymus hainesi* Ashmead, 1893. Pteromalidae: *Systellogaster* Gahan, 1917 = *Trineptis* Girault, 1908; *Paradibrachys* Girault, 1917 = *Pseudocatolaccus* Masi, 1908; Dvaliniinae Hedqvist, 1978 = Colotrechninae Thomson, 1876.

From time to time nomenclatural changes are necessary to correct previous misapplications of names. The changes given in this paper are the result of various studies which have provided names for workers engaged in studies of ecology and biological control. Because these changes alter or reinterpret previously used names which will be used in reports and/or publications, I take this opportunity to document them.

The treatment of taxa follows the format used for species synonymies in the 1979 edition of the "Catalog of Hymenoptera in America North of Mexico." Thus, literature citations for taxa names are incorporated in the synonymies but citations other than these are listed at the end of the paper. The following abbreviations are used in the text: UZMC = Universitetets Zoologiske Museum, Copenhagen; USNM = United States National Museum; BMNH = British Museum (Natural History); CNC = Canadian National Collection.

EURYTOMIDAE

Eurytoma verticillata (Fabricius)

Ichneumon verticillatus Fabricius, 1789. Suppl. Entomol. Syst., p. 232. Lectotype ♂, UZMC.

Eurytoma costata Ratzeburg, 1848. Ichn. Forstins., v. 2, p. 177. ♂. Type destroyed.

Eurytoma appendigaster of American authors (*nec* Swederus 1795, Sven. Vetensk. Acad. Handl. 16: 217).

The identities of *Eurytoma appendigaster* (Swederus) and *E. verticillata* in Europe were studied and clarified by Claridge (1959, 1960). Peck (1963), in his Nearctic catalog, cited Claridge (1960) and transferred all Nearctic references of *appendigaster* (of authors) to *verticillata*. Bugbee (1967: 485-86) omitted *verti-*

cillata from his revision of *Eurytoma* of America north of Mexico, but included *appendigaster* based on several specimens in the Canadian National Collection, Ottawa. Burks (1979) listed *appendigaster* as occurring throughout the north-eastern Nearctic seacoast, but did not refer to *verticillata*.

Through the courtesy of Drs. J. S. Noyes and Z. Bouček (British Museum, Natural History) I have examined specimens of *E. appendigaster* (det. by Claridge) and *E. verticillata* (det. by Bouček). I have also examined all the specimens in the U.S. National Museum (165 Holarctic determined as *appendigaster*), and the Canadian National Collection material seen by Bugbee (1967) and determined as *appendigaster*. All of this material is *verticillata*. Thus, *Eurytoma appendigaster* does not occur in North America.

Because Claridge (1959: 2–6) redescribed, figured, and gave key characters for separating *appendigaster* from *verticillata*, the reader is referred to that paper for methods of identification.

This species has been recorded from cocoons of various Braconidae (e.g., *Apanteles*) and Ichneumonidae through Lepidoptera (especially the gypsy moth in the Nearctic Region).

Eurytoma herrerae (Ashmead)

Bruchophagus herrerae Ashmead, 1902. Psyche 9: 324. ♀. Holotype ♀, USNM. [Examined]

Eurytoma gossypii Bugbee, 1967. Proc. U.S. Natl. Mus. 118: 493–494. ♀, ♂. Holotype ♀, USNM. [Examined]

Burks (in Bugbee, 1975: 251–252) synonymized the species *Eurytoma gossypii* Bugbee under the new combination *Eurytoma herrerae* (Ashmead). Bugbee acknowledged this synonymy but mistakenly continued to use the name *gossypii* for this species (1975, and personal communication). The 1979 edition of the Hymenoptera catalog does not reflect this synonymy because of its pre-1975 cut-off date for the section Eurytomidae. I have examined the holotypes and agree with the synonymy proposed by Burks.

Eurytoma herrerae is a parasite of the cotton boll weevil.

TORYMIDAE

Megastigmus albifrons Walker

Megastigmus albifrons Walker, 1869. Trans. R. Entomol. Soc. Lond. 1869: 314. ♂. Holotype ♂, BMNH.

Megastigmus grandiosus Yoshimoto, 1979. Can. Entomol. 111: 201–203. ♀, ♂. Holotype ♀, CNC. NEW SYNONYMY.

Megastigmus albifrons was described from a single male specimen reared from “a fir cone, from California.” Burks examined the type (1975) and concluded that it was the species being reared in southwestern United States from seeds of *Pinus ponderosa* Douglas. This is a very large, distinctive *Megastigmus* and the only one known from *Pinus* seed. The species *M. pinus* Parfitt is reared from *Abies* species and the record (Milliron, 1949: 320–321) of it from seeds of *Pinus sylvestris* L. is very doubtful.

Megastigmus grandiosus was described from material collected in Mexico: from “*Pinus montezumae*” and “*P. rudis*” seed in Calpulalpam; from “*Pinus aya-*

chuite" seed in "Avila Gonadan" (locality not verified); and from "*Pinus hartwegii*" seeds in Santo Tomas Apipilhuasco.

There has been some concern that *grandiosus* might be introduced into the United States from Mexico and it was considered for placement on the list of Pests Not Known to Occur in the United States (U.S. Department of Agriculture). I have compared nearly 100 specimens of *albifrons* from *Pinus ponderosa* in California with 100 specimens of *grandiosus* from *P. montezumae* Lambert in Mexico (paratype and topotypic specimens) and conclude that only a single species is involved. The tabular differences listed by Yoshimoto (1979: 205) apparently are based upon the holotype of *grandiosus* and 2 specimens of each sex of *albifrons*. His limited comparison unfortunately does not take into account variability even within a population. Many of the separating characters are subjective at best (e.g., relative coarseness of sculpture, transverseness of carinae, shape of stigma), or if measurable, cannot be used because of variability. The ratios of ocellar distances, for example, indicate that the ocelloccipital distance should be twice the distance between the frontal and the posterior ocelli in *grandiosus* and 1.5 times in *albifrons*. Measurements of 10 specimens of each species give an average of 1.44 for *grandiosus* (range 1.2–1.8) and 1.38 for *albifrons* (range 1.1–1.6). The ranges overlap so much that this character cannot be used.

The USNM collection contains specimens of *M. albifrons* from California, Arizona, New Mexico, Mexico, and Guatemala. This is the known distribution of the species, and all rearings have been made from seeds (or cones) of *Pinus* species.

Torymus hainesi Ashmead

Torymus hainesi Ashmead, 1893. Entomol. News 4: 278. ♀. Holotype ♀, USNM. [Examined]

Torymus Bakeri Cameron, 1904. Invert. Pac. 1: 58–59. ♀. Lectotype ♀, herein designated, BMNH. **NEW SYNONYMY.**

Callimome asphondyliae Gahan, 1919. Ann. Entomol. Soc. Am. 12: 161–162. ♂, ♀. (*nec asphondyliae* Kieffer and Jorgensen, 1910.) Holotype ♀, USNM. [Examined]

Torymus bakeri was described from at least four female specimens now housed at BMNH. I designate the specimen from San Marcos, Nicaragua (BMNH Hym. type 5.42) as lectotype. *Torymus bakeri* is identical to the wideranging, Neotropical species *hainesi*, and the range of this species is now extended south from El Salvador and Honduras to Nicaragua.

Torymus hainesi has been associated only with *Asphondylia websteri* Felt (Cecidomyiidae) on alfalfa. Its broad geographic range, however, from Nicaragua into southwestern United States, indicates a potentially larger range of cecidomyiid hosts on xeric plants.

PTEROMALIDAE

Tritneptis Girault

Tritneptis Girault, 1908. Psyche 15: 92.

Type-species: *Tritneptis hemerocampae* Girault. Orig. desig.

Systellogaster Gahan, 1917. Proc. U.S. Natl. Mus. 53: 209. **NEW SYNONYMY.**

Type-species: *Systellogaster ovivora* Gahan. Orig. desig.

Gahan compared *Systellogaster* to the genus *Coelopisthia* of authors (= *Kranophorus* Graham) and also to *Dibrachys* Förster and *Coelopisthoidea* Gahan (= *Dibrachys*). *Systellogaster*, however, differs from these genera by the absence of an occipital carina. Wallace (1973), in his key to genera of the *Dibrachys* group, recognized this fact, and he separated *Systellogaster* from *Tritneptis* on the basis that the former had the "occiput-vertex boundary angled," whereas in *Tritneptis* it was "not meeting at an angle." Without an occipital carina, the degree of angulation is purely subjective as an examination of 6 of the 7 known species of *Tritneptis* (including the type of the genus) confirms.

Systellogaster has had only two described species, both of which are Nearctic. *Tritneptis gahani* (Wallace) n. comb. differs markedly from typical *Tritneptis* in having the marginal vein 6–7 times the length of the stigmal (3 times or less in *Tritneptis*) and in having the vertex of the head and most of the scutum and scutellum polished (sculptured in *Tritneptis*). It might better be placed in its own genus in the *Dibrachys* group, but I hesitate to create another new name, when we scarcely understand the names that are already available in the Pteromalidae.

Tritneptis ovivora (Gahan) n. comb. is closely related to *T. scutellata* (Muesebeck). In Burks' key (1971) to species of *Tritneptis*, *ovivora* and *scutellata* both run to the first couplet. They may be separated as follows: In *ovivora* the median propodeal carina is present (may be broken) and the posterior ocellar line is as long as, or longer than, the ocelloccipital distance. In *scutellata* there is no median propodeal carina and the posterior ocellar line is about $\frac{2}{3}$ the length of the ocelloccipital distance. Additionally, *ovivora* is associated with cockroach oothecae whereas *scutellata* is associated with braconids in lepidopterous pupae.

Pseudocatolaccus Masi

Pseudocatolaccus Masi, 1908. Lab. Zool. Gen. Agric. Bol. Portici 3: 138–142.

Type-species: *Pseudocatolaccus asphondyliae* Masi. Monotypic.

(= *Ambylmerus nitescens* Walker, 1834)

Paradibrachys Girault, 1917. Descr. Hym. Chalcidoid. Variorum cum Observ. V, p. 1. NEW SYNONYMY.

Type-species: *Paradibrachys guizoti* Girault. Orig. des.

Although Girault (1917: 1) compared his genus *Paradibrachys* to *Dibrachys*, the genera have nothing in common with each other. *Paradibrachys* cannot even be placed in the *Dibrachys* group of genera (as defined by Wallace, 1973). *Paradibrachys* falls readily within the group of pteromalids which have a concave malar (genal) space (*Catolaccus* group, sensu Burks, 1954), and is inseparable from *Pseudocatolaccus*.

Pseudocatolaccus guizoti (Girault) N. COMB.

Paradibrachys guizoti Girault, 1917. Descr. Hym. Chalcidoid. Variorum cum Observ. V, p. 1. [♀]. Holotype ♀, USNM. [Examined]

Pseudocatolaccus americanus Gahan, 1919. Ann. Entomol. Soc. Am. 12: 164. ♀, ♂. Holotype ♀, USNM. [Examined]. NEW SYNONYMY.

Paradibrachys guizoti was described from 1 ♀ collected in the Argus Mountains of California, and *Pseudocatolaccus americanus* was described from 9 ♀ and 2 ♂ from Tempe, Arizona. The latter species was originally reared from *Asphondylia websteri* Felt (Diptera: Cecidomyiidae). Based upon an examination of the types

and additional specimens recently reared by Brad Hawkins (University of California, Riverside, CA) and Gwendolyn Waring (Northern Arizona University, Flagstaff, AZ), I believe the above-mentioned species are synonyms. This species is wide spread throughout southwestern United States and is associated with cecidomyiid gall formers (especially *Asphondylia* spp.) on *Atriplex* (Hawkins, unpublished data), *Larrea* (Waring, unpublished data), and other host plants such as *Bidens* and *Medicago* (Burks, 1979). It is currently the only species of the genus recorded from North America.

Colotrechninae Thomson, 1876

Colotrechnides Thomson, 1876, Hym. Scand., v. 4, p. 217.

Dvaliniinae Hedqvist, 1978. Entomol. Scand. 8: 135. NEW SYNONYMY.

Thomson first listed the "subtribus" Colotrechnides in 1876 (p. 217) with a short description of its salient characters. Later, in 1878 (p. 46-47), he described the genus *Colotrechnus* and the species *subcoeruleus* which he placed in this tribe.

In 1977 Hedqvist described the genus *Dvalinia* which he placed near Eutrichosomatinae but did not actually attribute to a subfamily. In 1978 he proposed the new subfamily Dvaliniinae based upon his previously described genus. He added also *Elachertodomyia* Girault, 1917 and two new genera *Bofuria* and *Bomburia*.

Dvaliniinae has only one character in common with the eutrichosomatines, namely the forward projecting axillae, but differs in every other respect so that comparison of the two groups is entirely artificial and most likely has nothing to do with phylogenetic relationships. Dvaliniinae should have been compared originally with Colotrechninae, and its description could have been avoided.

For purposes of identification, Colotrechninae may be recognized most readily by a combination of the forward projecting axillae and two longitudinal submedian grooves on the scutellum. While other subfamilies have one or other of these two characters, none has both.

The currently recognized genera and species of Colotrechninae are:

Bofuria maculata Hedqvist, 1978. Neotropical.

megastigmus (Ashmead), 1894. Neotropical.

Bomburia femorata Hedqvist, 1978. Neotropical.

Colotrechnus agromyzae Subba Rao, 1981. Oriental.

ignotus Burks, 1978. Nearctic.

subcoeruleus Thomson, 1878. Palearctic.

viridis (Masi), 1921. Palearctic.

Dvalinia axillaris Hedqvist, 1977. Neotropical.

Elachertodomyia phloeotribi (Ashmead), 1896. Nearctic.

Of the above species I have examined specimens as follows: *Bofuria megastigmus* [Ashmead (1894: 155) described a male specimen from St. Vincent as the type of the species, and this specimen is in BM(NH). In USNM is a female from Grenada, which is the same specimen cited by Howard (1897) as *megastigmus* and in all probability was identified by Ashmead. This serves as a metatype for current purposes]; *Colotrechnus ignotus* (types examined), *C. subcoeruleus* (det. Bouček, Ruschka), *C. viridis* (det. Bouček); *Elachertodomyia phloeotribi* [female lectotype, herein designated, and newly reared material ex *Rhus glabra* L. stems

containing *Pityophthorus lautus* Eichhoff (*new host record*) in Michigan (*new state record*), and ex *Phloeosinus cristatus* (LeConte) in *Cupressus* (*new host record*) from California]; *Dvalinia axillaris* (paratype).

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